

CLAIMS

1. An inverter transformer which is provided in an inverter circuit to invert DC into AC, and which transforms a voltage inputted at a primary side and outputs the transformed voltage at a secondary side, the inverter transformer comprising:
at least one winding unit comprising a bar-shaped magnetic core, and a primary winding and a secondary winding wound around the bar-shaped magnetic core; and
a magnetic resin formed of a resin containing a magnetic substance, the magnetic resin covering at least one portion of the winding unit with respect to a core length direction so that the primary and the secondary windings have respective predetermined leakage inductances.
2. An inverter transformer according to Claim 1, wherein the magnetic resin covers an entire portion of the winding unit with respect to the core length direction.
3. An inverter transformer according to Claim 1, wherein the magnetic resin covers, with respect to the core length direction, at least one of: both end portions of the winding unit; and a portion of the winding unit located at a boundary area between the primary and secondary windings.
4. An inverter transformer according to any one of Claims 1 to 3, wherein an external unit having a larger saturation magnetic flux density than the magnetic resin is disposed so as to cover at least one portion of a circumference of a transformer body which comprises the at least one winding unit and the magnetic resin.
5. An inverter transformer according to Claim 4, wherein the external unit has a smaller magnetic resistance than the magnetic resin.
6. An inverter transformer according to Claim 4 or 5, wherein the external unit has one of a squared C configuration and a substantially circular configuration in cross section so as to cover the circumference of the transformer body.
7. An inverter transformer according to Claim 4 or 5, wherein the external unit comprises a plurality of members; and the members are combined into a box configuration so as to cover the transformer body.
8. An inverter transformer according to any one of Claims 4 to 7, wherein the external

unit is made of a sintered material.

9. An inverter transformer according to any one of Claims 1 to 8, wherein the magnetic resin has a smaller relative magnetic permeability than the bar-shaped magnetic core.

10. An inverter transformer according to any one of Claims 1 to 9, wherein the magnetic substance contained in the resin is one of Mn-Zn ferrite, Ni-Zn ferrite, and iron powder.